

REMARKS/ARGUMENTS

Claims 3, 5-8, 12 and 24-28 are active. Claims 1, 9-11, 13-15, 22 and 23 have been cancelled without prejudice to their representation in a continuation-type application. To place it in condition for allowance, Claim 12 has been amended to incorporate the limitations of Claims 1 and 10. New Claims 24-28 depend from Claim 12 which has been indicated as being allowable and claim the particular types of milk products which are disclosed on page 12, lines 18-20, of the specification. The Applicants note that Claim 8 as amended April 16, 2004, did not identify this claim as "Currently Amended". Claim 8 is presently amended and is "Currently Amended" status properly indicated. Accordingly, the Applicants do not believe that any new matter has been added. Favorable consideration is respectfully requested.

The Applicants thank Examiner Lewis for the courteous discussion of November 8, 2004. To facilitate the identification of allowable subject matter, it was suggested that the Applicants amend Claim 12 to incorporate the limitations of Claims 1 and 10 from which it depended; and that Claims 1, 9-11, 13-15, 22 and 23 as well as non-elected Claims 16-21 be cancelled without prejudice. Since Claim 12, which is directed to milk products, is otherwise in condition for allowance, it was proposed to add dependent claims to the particular milk products disclosed in the specification. The prior amendment of Claim 8 to add a "wherein clause" was discussed. Since Claim 8 depends from Claim 6 which was indicated as allowable, the Applicants proposed deletion of the wherein clause. To assure that the PTO record is complete, it was suggested that the Applicants provide a copy of the information disclosure statement filed August 14, 2003 and date-stamped filing receipt. The Applicants have now amended the claims and provide a copy of the previously-filed information disclosure statement. Favorable consideration of this amendment and allowance of this application is now respectfully requested.

Information Disclosure Statement

The Applicants respectfully request acknowledgement of the information disclosure statement filed August 14, 2003. This statement cites one patent and twenty seven publications.

Prior Art Rejections

The prior art rejections are moot in view of the cancellation of the rejected claims. The Applicants thank Examiner Lewis for indicating that Claims 3 and 5-8 are allowable and that Claim 12 would be allowable if amended to incorporate the limitations of the claims from which it depends.

CONCLUSION

In view of the above amendments and remarks, Applicants respectfully submit that this application is now in condition for allowance. Early notification to this effect is earnestly solicited.


Respectfully submitted,

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**COPY**



OSMM&N File No. 215051US0

Serial No. 09/986,535

In the matter of the Application of: Nobunao IKEWAKI, et al.

For: BETA-1.3-1.6 GLUCAN (AUREOBASIDIUM MEDIUM)

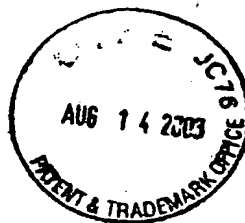
Dept.: Chemical

By: NFO/TMC/krs

Due Date: n/a

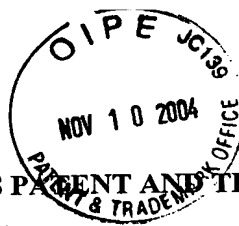
The following has been received in the U.S. Patent Office on the date stamped herec

- Check for \$180.00
- Information Disclosure Statement
- Cited References 1
- Cited Pending Applications 27
- Dep. Acct. Order Form
- PTO-1449



**BEST AVAILABLE COPY**

Docket No. 215051US0



IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

IN RE APPLICATION OF: Nobunao IKEWAKI, et al.

SERIAL NO: 09/986,535

GAU: 1623

FILED: November 9, 2001

EXAMINER: Josephine Young

FOR: BETA-1.3-1.6 GLUCAN (AUREOBASIDIUM MEDIUM)

INFORMATION DISCLOSURE STATEMENT UNDER 37 CFR 1.97

COMMISSIONER FOR PATENTS  
ALEXANDRIA, VIRGINIA 22313

SIR:

Applicant(s) wish to disclose the following information.

REFERENCES

- ☒ The applicant(s) wish to make of record the references listed on the attached form PTO-1449. Copies of the listed references are attached, where required, as are either statements of relevancy or any readily available English translations of pertinent portions of any non-English language references.
- ☒ A check is attached in the amount required under 37 CFR §1.17(p).

RELATED CASES

- ☐ Attached is a list of applicant's pending application(s) or issued patent(s) which may be related to the present application. A copy of the patent(s), together with a copy of the claims and drawings of the pending application(s) is attached along with PTO 1449.
- ☐ A check is attached in the amount required under 37 CFR §1.17(p).

CERTIFICATION

- ☐ Each item of information contained in this information disclosure statement was first cited in a communication from a foreign patent office in a counterpart foreign application not more than three months prior to the filing of this statement.
- ☐ No item of information contained in this information disclosure statement was cited in a communication from a foreign patent office in a counterpart foreign application or, to the knowledge of the undersigned, having made reasonable inquiry, was known to any individual designated in 37 CFR §1.56(c) more than three months prior to the filing of this statement.

DEPOSIT ACCOUNT

- ☒ Please charge any additional fees for the papers being filed herewith and for which no check or credit card payment form is enclosed herewith, or credit any overpayment to deposit account number 15-0030. A duplicate copy of this sheet is enclosed.

Respectfully submitted,

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Form PTO 1449  
(Modified)U.S. DEPARTMENT OF COMMERCE  
PATENT AND TRADEMARK OFFICE

ATTY DOCKET NO.

215051US0

SERIAL NO.

09/986,535

LIST OF REFERENCES CITED BY APPLICANT

APPLICANT

Nobunao IKEWAKI, et al.

FILING DATE

November 9, 2001

GROUP

1623

## U.S. PATENT DOCUMENTS

EXAMINER INITIAL		DOCUMENT NUMBER	DATE	NAME	CLASS	SUB CLASS	FILING DATE IF APPROPRIATE
	AA	5,789,579	8/4/98	FUJII et al.	536	119	
	AB						
	AC						
	AD						
	AE						
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	AM						
	AN						

## FOREIGN PATENT DOCUMENTS

		DOCUMENT NUMBER	DATE	COUNTRY	TRANSLATION	
					YES	NO
	AO					
	AP					
	AQ					
	AR					
	AS					
	AT					
	AU					
	AV					

## OTHER REFERENCES (Including Author, Title, Date, Pertinent Pages, etc.)

	AW	ABEL et al., "Stimulation of Human Monocyte $\beta$ -Glucan Receptors by Glucan Particles Induces Production of TNF- $\alpha$ and IL-1 $\beta$ ," Int. J. Immunopharmacology, Vol. 14, No. 8, 1992, pp. 1363-1373.
	AX	CZOP et al., "Isolation and Characterization of $\beta$ -Glucan Receptors on Human Mononuclear Phagocytes," J. Exp. Med., Volume 173, June 1991, pp. 1511-1520.
	AY	CZOP et al., "Phagocytosis of Particulate Activators of the Human Alternative Complement Pathway Through Monocyte $\beta$ -Glucan Receptors," Biochemistry of the Acute Allergic Reactions: Fifth International Symposium, June 20-21, 1988, pp. 287-296.
	AZ	DI RENZO et al., "The function of human Nk cells is enhanced by $\beta$ -glucan, a ligand of CR3 (CD11b/CD18)," Eur. J. Immunol., 1992, 21, pp. 1755-1758.

☒ Additional References sheet(s) attached

Examiner

Date Considered

\*Examiner: Initial if reference is considered, whether or not citation is in conformance with MPEP 609; Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant.

Form PTO 1449 (Modified)		U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE		ATTY DOCKET NO. 215051US0		SERIAL NO. 09/986,535	
LIST OF REFERENCES CITED BY APPLICANT				APPLICANT Nobunao IKEWAKI, et al.			
				FILING DATE November 9, 2001		GROUP 1623	
OTHER REFERENCES (Including Author, Title, Date, Pertinent Pages, etc.)							
	AAA	ELSTAD et al., "CD11b/CD18 Integrin and a $\beta$ -glucan Receptor Act in Concert to Induce the Synthesis of Platelet-Activating Factor by Monocytes <sup>1</sup> ," J. Immunol., Vol. 152, 1994, pp. 220-230					
	AAB	HETLAND et al., "Protective Effect of $\beta$ -Glucan Against Mycobacterium bovis, BCG Infection in BALB/c Mice," Scand. J. Immunol., 47, 1998, pp. 548-553					
	AAC	JESPERGAARD et al., "Protective Immunity against Streptococcus mutans Infection in Mice after Intranasal Immunization with the Glucan-Binding Region of S. mutans Glucosyltransferase," Infection and Immunity, Vol. 67, No. 12, Dec. 1999, pp. 6543-6549					
	AAD	KAY et al., "Enhancement of human monocyte $\beta$ -glucan receptors by glucocorticoids," Immunology, 81, 1994, pp. 96-102. ROSS et al., "Specificity of Membrane Complement Receptor Type Three (CR <sub>3</sub> ) for $\beta$ -Glucans <sup>1</sup> ," Complement 4, 1987, pp. 61-74.					
	AAE	KOMATSU et al., "Host-Mediated Antitumor Action of Schizophyllan, A Glucan Produced by Schizophyllum Commune," GANN, 60, April 1969, pp. 137-144.					
	AAF	MCLEISH et al., "Bacterial phagocytosis activates extracellular signal-regulated kinase and p38 mitogen-activated protein kinase cascades in human neutrophils," Journal of Leukocyte Biology, Volume 64, December 1998, pp. 835-844					
	AAG	MOERK et al., "Effects of particulate and soluble (1-3)- $\beta$ -glucans on Ca <sup>2+</sup> influx in NR8383 alveolar macrophages," Immunopharmacology 40, 1998, pp. 77-89.					
	AAH	NOBUTAKE, "Kobunshi Kako. (Polymer Applications), Kobunshi Kankokai., vol. 36, no. 5, 1987, pp. 9-16.					
	AAI	OI et al., "Structural Studies on "Isosclerotan", a New Glucan Isolated from Sclerotinia Fungus, by Physical, Chemical and Enzymatic Methods," Agr. Biol. Chem., Vol. 30, No. 3, 1966, pp. 266-273.					
	AAJ	PATCHEN et al., "Glucan-Induced Hemopoietic and Immune Stimulation: Therapeutic Effects in Sublethally and Lethally Irradiated Mice," Meth and Find Exptl Clin Pharmacol, 1986, 8(3), pp. 151-155					
	AAK	POUTSIKA et al., "Cross-Linking of the $\beta$ -Glucan Receptor on Human Monocytes Results in Interleukin-1 Receptor Antagonist But Not Interleukin-1 Production," Blood, Vol. 82, No. 12, December 15, 1993, pp. 3695-3700.					
	AAL	ROSS et al., "Therapeutic intervention with complement and $\beta$ -glucan in cancer," Immunopharmacology 42, 1999, pp. 61-74.					
	AAM	ROSS et al., "Specificity of Membrane Complement Receptor Type Three (CR <sub>3</sub> ) for $\beta$ -Glucans <sup>1</sup> ," Complement 4, 1987, pp. 61-74.					
	AAN	SINGH et al., "Scleroglucan, an antitumor polysaccharide from Sclerotium glaucum," Carbohydrate Research, 37, 1974, pp. 245-247.					
	AAO	SMILEY, "Microbial Polysaccharides - A Review," Food Technology, September 1966, pp. 112-116.					
	AAP	SZCZESNIAK et al., "Objective Characterization of the Mouthfeel of Gum Solutions," Journal of Food Science, Volume 27, Number 4, July-August 1962, pp. 381-385..					
	AAQ	TERAMOTO, "Markedly increased plasma (1 $\rightarrow$ 3) $\beta$ -D-glucan is a diagnostic and therapeutic indicator of Pneumocystis carinii pneumonia in a non-AIDS patient," Journal of Medical Microbiology, vol. 49, 2000, pp. 393-394.					
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	BAA	THORNTON et al., "Analysis of the Sugar Specificity and Molecular Location of the $\beta$ -Glucan-Binding Lectin Site of Complement Receptor Type 3 (CD11b/SC18)," J. Immunol., Vol. 156, 1996, pp. 1235-1246					
	BAB	WAKSHULL et al., "PGG-Glucan, a soluble $\beta$ -(1,3)-glucan, enhances the oxidative burst response, microbicidal activity, and activates an NF- $\kappa$ B-like factor in human PMN: Evidence for a glycosphingolipid $\beta$ -(1,3)-glucan receptor," Immunopharmacology 41, 1999, pp. 89-107.					
	BAC	XIA et al., "Generation of Recombinant Fragments of CD11b Expressing the Functional $\beta$ -Glucan-Binding Lectin Site of CR3 (CD11b/CD18)", J. Immunol., Vol. 162, 1999, pp. 7285-7293.					
	BAD	XIA et al., "The $\beta$ -Glucan-Binding Lectin Site of Mouse CR3 (CD11b/CD18) and Its Function in Generating a Primed State of the Receptor That Mediates Cytotoxic Activation in Response to iC3b-Opsonized Target Cells", The American Association of Immunologists, 1999, pp. 2281-2290					
	BAE	YAN et al., " $\beta$ -Glucan, a "Specific" Biologic Response Modifier That Uses Antibodies to Target Tumors for Cytotoxic Recognition by Leukocyte Complement Receptor Type 3 (CD11 b/CD18)", J. Immunol., Vol. 163, 1999, pp. 3045-3052.					
	BAF	YOSHIOKA et al., "Immunotoxicity of soluble $\beta$ -glucans induced by indomethacin treatment," FEMS Immunology and Medical Microbiology, 21, 1998, pp. 171-179.					
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